

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Takanori SUGIYAMA et al.

Serial No : Not Yet Assigned (National Stage of PCT/JP2005/017922)

I.A. Filed : September 29, 2005

For : OPTICAL SWITCH

PRELIMINARY AMENDMENT

Commissioner of Patents
U.S. Patent and Trademark Office
Customer Service Window, Mail Stop _____
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Sir:

Prior to the examination of the above-identified patent application on the merits, the Examiner is respectfully requested to amend the claims as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An optical switch for switching combinations of optical paths between a plurality of optical fibers, comprising:

a device body with at least three optical fibers being led out therefrom; and

a switching optical block housed in the device body so as to be optically coupled to the respective optical fibers,

the optical block comprising:

a lens block having one surface side to place the optical fibers on, and having a plurality of collimating lenses placed side by side in the device body;

a prism which is placed distantly from the lens block on the other surface side of the lens block such that the direction of travel of light incident from the optical fibers through the collimating lens is changed to be directed toward a further optical fiber;

a switching mirror placed to be insertable and removable into and from between the lens block and the prism; and

an actuator for driving the mirror,
wherein the respective optical fibers are led out from the one surface
side of the device body, and
the lens block has the plurality of integrally formed collimating
lenses.

2. (Cancelled)

3. (Currently Amended) The optical switch according to claim 1 -~~2~~,
wherein the lens block has fixed thereto ferrules holding the respective
optical fibers, respectively.

4. (Original) The optical switch according to claim 3, wherein the
bonding surfaces between the lens block and the ferrules are formed by
planes inclined at an angle to at least some extent relative to planes
perpendicular to axes of passing light beam.

5. (Original) The optical switch according to claim 4, wherein the
optical block comprises one optical bench contained in and mounted on the
device body for positioning and fixing the lens block, the prism and the
actuator.

6. (Original) The optical switch according to claim 3, wherein the optical block comprises one optical bench contained in and mounted on the device body for positioning and fixing the lens block, the prism and the actuator.

7. (Currently Amended) The optical switch according to claim 1 -~~2~~, wherein the bonding surfaces between the lens block and the ferrules are formed by planes inclined at an angle to at least some extent relative to planes perpendicular to axes of passing light beam.

8. (Original) The optical switch according to claim 7, wherein the optical block comprises one optical bench contained in and mounted on the device body for positioning and fixing the lens block, the prism and the actuator.

9. (Currently Amended) The optical switch according to claim 1 -~~2~~, wherein the optical block comprises one optical bench contained in and mounted on the device body for positioning and fixing the lens block, the prism and the actuator.

10. (Original) The optical switch according to claim 1, wherein the lens block has fixed thereto ferrules holding the respective optical fibers, respectively.

11. (Original) The optical switch according to claim 10, wherein the bonding surfaces between the lens block and the ferrules are formed by planes inclined at an angle to at least some extent relative to planes perpendicular to axes of passing light beam.

12. (Original) The optical switch according to claim 11, wherein the optical block comprises one optical bench contained in and mounted on the device body for positioning and fixing the lens block, the prism and the actuator.

13. (Original) The optical switch according to claim 10, wherein the optical block comprises one optical bench contained in and mounted on the device body for positioning and fixing the lens block, the prism and the actuator.

14. (Original) The optical switch according to claim 1, wherein the bonding surfaces between the lens block and the ferrules are formed by planes inclined at an angle to at least some extent relative to planes perpendicular to axes of passing light beam.

15. (Original) The optical switch according to claim 14, wherein the optical block comprises one optical bench contained in and mounted on the device body for positioning and fixing the lens block, the prism and the actuator.


16. (Original) The optical switch according to claim 1, wherein the optical block comprises one optical bench contained in and mounted on the device body for positioning and fixing the lens block, the prism and the actuator.

REMARKS

By the above amendment, the claims have been amended to incorporate the amendments made under PCT Article 19 in the International Application, and no estoppel should be deemed to be associated with this amendment.

If there should be any questions, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,
Takanori SUGIYAMA et al.



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June 9, 2006
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